

Parkinson's Disease stinks. Plain and simple.

- About one million Americans live with Parkinson's Disease (PD), which is more than the combined number of people living with multiple sclerosis, muscular dystrophy and Lou Gehrig's disease.
- Approximately 10 in every thousand individuals over the age of 50 have early stage Parkinson's Disease.
- More than 10 million people worldwide are living with PD.
- Incidence of PD increases with age, but an estimated 4% of PD patients are diagnosed prior to age 50.
- Men over the age of 70 have a 35 percent higher risk of developing PD for every 10 years of continuing lifespan.
- By 2040, the rate of people diagnosed with PD is expected to outpace that of Alzheimer's Disease.
- The combined cost of Parkinson's is estimated to be nearly \$25 billion per year.
- **There is no current definitive, absolute test to diagnose PD other than a post-mortem exam.**
- An estimated 10-20% of PD cases are misdiagnosed.

How the dogs of San Juan Island are helping to solve the mystery of Parkinson's Disease.

Dogs, once trained on an odor, are highly selective and able to sort, pinpoint and identify minute traces of odor, even when millions of other odor molecules are present. At PADs, the dogs are working in tandem with a biochemical research scientist who uses mass spectrometry to analyze and identify odorant compounds in Parkinson's. This partnership of science and dogs is helping to fast track the search for the cause of PD. Understanding the cause may open the door to finding the cure.



Buster: 75 days training
215 rounds • 521 exposures
44 unique PD samples

PADs for Parkinson's is a 501(c)(3) nonprofit organization.

It is the mission of PADs to: 1) Train dogs to detect Parkinson's Disease; 2) Supply reproducible training protocol; 3) Assist with research efforts in search of a cure.

PADs does not diagnose Parkinson's Disease or any other human health condition. PADs research is solely used to evaluate whether a dog's ability to detect certain odors may be helpful to the scientific research community.

What is Parkinson's Disease? Neurotransmitters create the pathways for how the cells in your body communicate. Your brain uses neurotransmitters to tell your body how to move. In Parkinson's Disease, neurons that produce the neurotransmitter dopamine die off in the basal ganglia, an area of the brain that controls body movement. As more and more of these dopaminergic neurons are destroyed, the brain can no longer control the body because the brain can no longer communicate with the body. This results in people shaking and jerking in spasms. As the disease progresses, people have less and less control over their bodily functions until they can no longer breathe or swallow.